



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,599	08/14/2001	Michael Gomer Stelljes JR.	8674	9182
27752	7590	11/04/2003	EXAMINER	
THE PROCTER & GAMBLE COMPANY INTELLECTUAL PROPERTY DIVISION WINTON HILL TECHNICAL CENTER - BOX 161 6110 CENTER HILL AVENUE CINCINNATI, OH 45224			HALPERN, MARK	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/929,599	STELLJES ET AL.	
	Examiner	Art Unit	
	Mark Halpern	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22, 28 and 29 is/are rejected.
- 7) ☒ Claim(s) 23-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- 1) Acknowledgement is made of Amendment received 8/11/2003. Applicants amend claim 3.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- 2) Claims 1, 6-16, 19, 28-29, are rejected under 35 U.S.C. 102(b) as being anticipated by Holden (3,284,285).

Claims 1, 6, 14-16, 19, 28-29: Holden discloses a paper web 10 formed on a Foundrinier screen and moving from left to right on top of an endless loop of porous belt 12 supported by guide rolls 14 and 16 and tension roll 20. The formed web when entering the belt 12 is at a consistency of about 10 % to about 20 %. The porous belt 12 is in a nip between roll 26 and a relatively large perforated roll 28, beneath the roll 28, and in a nip between roll 28 and roll 30. Roll 28 perforations 44 are large in number and closely spaced. Roll 28 is patterned in that it contains a very large number of closely spaced perforations. The perforations may be radially drilled holes or flared to larger diameter at their outer ends (col. 3, lines 45-55). Roll 28 is rotatable upon a hollow shaft 32. Downward force is put on roll 28, whereby pressure is exerted upon

web 10 and belt 12 in the nips formed between the rolls 28 and the rolls 26 and 30. A receiver 46 is positioned inside the path of the belt 12 and beneath the rolls 26, 28 and 30, to collect water discharged from the web 10 through the porous belt 12.

Compressed air (under positive pressure) is supplied to chamber 36 of roll 28 for discharge through perforations 44 through web 10 and belt 12, discharging both air and water from the web to receiver 46. Drain 54 of receiver 46 is connected to a suction pump (under negative pressure). Differential in gaseous pressure between high pressure in chamber 36 in perforated roll 28 and receiver 46 is in a range from 4 psi to 60 psi in pressure differential, depending on the moisture removal required. This reads on a pressure greater than claimed breakthrough pressures of the pores (col. 3, line 1 to col. 6, line 19). The present invention recites limitation "providing at least one limiting orifice medium comprising a plurality of pores having a breakthrough pressure". A "limiting orifice" is defined in Ensign (5,274,930, incorporated into Applicants' application by reference, in col. 8, lines 45-49) as "the component which provides the greatest individual component of flow resistance to the air flow". The web of Holden is pressed between roll 28 having perforations or pores and porous belt 12, and thus roll 28 reads on the limiting orifice medium through which vacuum is applied of greater pressure than the breakthrough pressure of the pores.

Claims 7-9: linear pressures on the web of up to 1000 pli are disclosed (col. 8, lines 41-75).

Claims 10-12: pressures on the web of up 60 psi are disclosed (col. 6, lines 1-19).

Art Unit: 1731

Claim 13: the roll 28 is patterned in that it contains a very large number of closely spaced perforations. The perforations may be radially drilled holes or flared to larger diameter at their outer ends (col. 3, lines 45-55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3) Claims 2, 21-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Holden.

Claim 2: Holden is applied as above for claim 1, Holden fails to disclose that the perforated roll 28 is substantially incompressible. It would have been obvious, to one skilled in the art at the time the invention was made, that the perforated roll 28 is substantially incompressible because the roll is designed to withstand forces applied on the roll, air pressures of up to 60 psi., and linear tension on the fabric of up to 1000 pli facing the roll (col. 8, lines 41-75).

Claims 21-22: Holden is applied as above for claim 19, Holden fails to disclose that the perforated roll 28 has the top most surface plane area patterned between about 10 % and about 75 % of the total surface. It would have been obvious, to one skilled in the art at the time the invention was made, that the perforated roll 28 have the top most surface plane area patterned between about 10 % and about 75 % of the total surface,

since roll 28 contains a very large number of closely spaced perforations which includes perforations that may be radially drilled holes or flared to larger diameter at their outer ends (Holden, col. 3, lines 45-55).

4) Claims 3-5, 17-18, 20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Holden in view of Ensign (5,584,126).

Claims 3-5: Holden is applied as above for claim 1, Holden fails to disclose the diameters of the pores. Ensign ('126) discloses a limiting orifice drying process and incorporated by reference, per col. 4, lines 39-45, Ensign (5,274,930). Ensign ('930) in turn discloses pore size of six microns (col. 12, lines 22-30). It would have been obvious, to one skilled in the art at the time the invention was made, that the reference is to the pore diameter dimension. It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Ensign and Holden, because such a combination would provide a more precise means of removal of water from the formed web in the design of Holden.

Claim 17: the limiting orifice media is a multi layer media as disclosed by Ensign ('930), col. 9, line 35 to col. 12, line 38.

Claim 18: the temperature of 500 degrees F is disclosed by reference Ensign ('930), col. 7, lines 50-64.

Claim 20: Holden is applied as above for claim 19, Holden fails to disclose the the period of time the web is in contact with the limiting orifice medium. Ensign ('126) (col. 5, lines 8-15) discloses the period of time the web is in contact with the limiting orifice medium. It would have been obvious, to one skilled in the art at the time the

Art Unit: 1731

invention was made, to combine the teachings of Ensign and Holden, because such a combination would provide a more precise means of removal of water from the formed web in the design of Holden.

Allowable Subject Matter

5) Claims 23-27, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for indicating allowable subject matter is that the cited prior art does not show a method of reducing the moisture content of a fibrous web, said method including the step of: foreshortening the web prior to the step of pressing the web between the fluid permeable patterned carrier and the limiting orifice medium (claim 23); through-air-drying the web to a consistency claimed (claims 24-27).

Response to Amendment

6) Claims 3-5, rejection under 35 U.S.C. 112, second paragraph, is withdrawn in view of amended claim 3.

7) Applicant's arguments filed 8/11/2003, have been fully considered but they are not persuasive.

Applicants allege that the cited prior art, Holden, does not teach a limiting orifice medium, pressing a web between a fluid permeable carrier and a limiting orifice, or the application of a vacuum to the pores of a limiting orifice medium in excess of the breakthrough pressure of the pores.

Examiner responds as follows. A "limiting orifice" is defined in Ensign ('930, incorporated into Applicants' application by reference) as "the component which provides the greatest individual component of flow resistance to the air flow". The web of Holden is pressed between roll 28 having perforations or pores and porous belt 12, and thus roll 28 reads on the limiting orifice medium through which vacuum is applied of greater pressure than the breakthrough pressure of the pores.

Conclusion

8) **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone number is 703-305-4522. The examiner can normally be reached on Mon-Fri, (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703-308-1164. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9309.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

MH

Mark Halpern
Patent Examiner
Art Unit 1731


STEVEN P. GRIFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700